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RESEARCH ARTICLE

New and additional faunistic records of the long-legged flies (Diptera: Dolichopodidae) from Azerbaijan and Georgia

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Abstract

New and additional faunistic records for 13 species of Dolichopodidae were given from Azerbaijan and Georgia. The species richness of Azerbaijan increased to 92 taxa as *Sybistroma transcaucasica* (Stackelberg, 1941) and *Thinophilus quadrimaculatus* Becker, 1902 are the new records for the Azerbaijan territory. *Campsicnemus marginatus* Loew, 1857, *Sybistroma transcaucasica* (Stackelberg, 1941) and *Tachytrechus hamatus* Loew, 1871 are recorded for the first time in Georgia and the species diversity increased to 74 taxa. and additional faunistic records for 13 species of Dolichopodidae were given from Azerbaijan and Georgia.

Keywords

Diptera, Dolichopodidae, *Sybistroma*, *Thinophilus*, first records, Transcaucasia

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Introduction

The Transcaucasian region is one of the 35 richest and most endangered sites in the world ("biodiversity hotspots") with an extraordinary diversity of endangered and endemic species (Myers et al. 2012). However, the Diptera diversity of the Transcaucasian area (Armenia, Azerbaijan, and Georgia) is insufficiently investigated (Oboňa et al. 2017).

According to the authors knowledge, 90 species of the long-legged flies are recently known from territory of Azerbaijan (Negrobov et al. 2020) and 71 species – from territory of Georgia (Negrobov et al. 2020.). This paper summarizes our new and additional faunistic records.

Material and methods

Dipterans were collected by sweep netting from the vegetation growing along the watercourses and lakes by the members of V4 & Eastern Partnership team (Visegrad Group + Georgia and Azerbaijan - abbreviated as V4 & EP leg.) in April 26–May 10, 2019. The captured specimens were preserved in 75% ethanol directly in the field. The material is deposited in the collection of the first author Oleg P. Negrobov (Voronezh University, VU), who also identified these species. Distribution information is given only for the new country records according to Grichanov (2007).

Taxonomy

***Campsicnemus curvipes* (Fallén, 1823)**

AZERBAIJAN • 1 ♂, 3 ♀; Oğuz Region, Baş Daşağil, waterfall and brook in deciduous forest, 1325 m a.s.l.; 41°10.916′ N, 47°23.717′ E, V4 & EP leg., 6 May 2019, VU 119-153–119-156.

***Campsicnemus marginatus* Loew, 1857**

GEORGIA • 2 ♀; Kvemo Kartli Region, Poladauri (Chatakh), Lokistskali Stream and springs, 700 m a.s.l.; 41°19.848′ N, 44°29.881′ E, V4 & EP leg., 29 Apr. 2019; VU 118-128–118-129.

Distribution. Greece; Europe, Afghanistan. New from Georgia and Transcaucasus.

***Campsicnemus umbripennis* Loew, 1856**

AZERBAIJAN • 1 ♂, 1 ♀; Qax district, Lekit, large stream and its littoral, 530 m a.s.l.; 41°29.282′N, 46°51.349′ E; 7 May 2019; V4 & EP leg.; VU 119-149. • 1 ♂, 1 ♀; Şeki district, Cuma, Ayrichay River, marsh and open woods, 200 m a.s.l.; 41°14.223′ N, 46°54.601′ E; 7 May 2019; V4 & EP leg.; VU 119-163 • 3 ♂, 1 ♀; Qax district, Qum, forest brooks above the village, 845 m a.s.l.; 41°28.215′ N, 46°55.977′ E; 8 May

2019; V4 & EP leg.; VU 119-144–119-117 • 3 ♂, 1 ♀; Qebele district, Laza, springs and brooks on the opposite slope, 1435 m a.s.l.; 41°02.399' N, 47°55.891' E; 10 May 2019; V4 & EP leg.; VU 119-143.

GEORGIA • 1 ♂; Kakheti Region, tributary of the Stori river, 573 m a.s.l.; 42°09'08.1" N, 45°25'01.7" E; 3 May 2019; V4 & EP leg.; VU 119-115.

***Diaphorus disjunctus* Loew, 1857**

AZERBAIJAN • 1 ♀; Oğuz district, Sincan, open river, 370 m a.s.l.; 40°56.047' N, 47°34.916' E; 6 May 2019; V4 & EP leg.;. VU 119-141.

***Hydrophorus balticus* (Meigen, 1824)**

AZERBAIJAN • 2 ♀; Qax district, Lekit, large stream and its littoral, 530 m a.s.l.; 41°29.282' N, 46°51.349' E; 7 May 2019; V4 & EP leg.; VU 119-161.

***Liancalus virens* (Scopoli, 1763)**

GEORGIA • 1 ♀; Kakheti region, Khadori gorge, seeps and waterfall of the Samkura River, 1195 m a.s.l.; 42°16.463' N, 45°21.104' E; 2 May 2019; V4 & EP leg.; 1 female, VU 119-152 • 1 ♀; the same, rocky stream along the road towards Abano (Torha) Pass, 1470 m a.s.l.; N42°13.605', E45°28.805'; 3 May 2019; V4 & EP leg.; VU 118-151.

***Rhaphium appendiculatum* Zetterstedt, 1849**

AZERBAIJAN: • 1 ♂; Şeki district, Kiş, forest beneath Galarsan ruin, 1190 m a.s.l.; 41°15.743' N, 47°13.617' E; 5 May 2019; V4 & EP leg.; VU 119-150 • 1 ♂; the same, Şeki, Quirxbulaq, karst brook in deciduous forest, 595 m a.s.l.; 41°08.786' N, 47°15.532' E; 6 May 2019; V4 & EP leg.; VU 119-157.

***Rhaphium fissum* Loew, 1850**

GEORGIA • 1 ♂; Mtskheta-Mtianeti region, Meneso, spring, its outlet and surrounding bush, 940 m a.s.l.; 42°14.809' N, 44°40.486' E; 27 Apr. 2019; V4 & EP leg.; VU 118-122.

***Sybistroma transcaucasica* (Stackelberg, 1941)**

AZERBAIJAN • 1 ♂, 1 ♀; Qax district, Lekit, large stream and its littoral, 530 m a.s.l., 41°29.282' N, 46°51.349' E; 7 May 2019; V4 & EP leg.; VU 119-157–119-158.

GEORGIA • 1 ♂; Kakheti district, tributary of the Stori river, 573 m a.s.l.; 42°09'08" N, 45°25'01.7" E; 3 May 2019; V4 & EP leg.; VU 119-129.

Distribution. Abkhazia; Russia: Adygea, Krasnodar; Turkey. First records for Azerbaijan, Georgia and Transcaucasus.

***Syntormon pallipes* (Fabricius, 1794)**

GEORGIA • 1 ♀; Mtskheta-Mtianeti Region, Kharkheti (Nadibani), Aragvi River and its sidestream, 1235 m a.s.l.; 42°24.961' N, 44°36.254' E; 27 Apr. 2019; V4 & EP leg.; VU 118-130 • 1 ♂; the same, Tsinamkhari (Mejilaurni), stream, 1220 m a.s.l.;

42°19.394' N, 44°38.766' E; 28 Apr. 2019; V4 & EP leg.; VU 118-136 • 1 ♂, 1 ♀; the same, Tsinamkhari, forest edge swamp, 1150 m a.s.l., 42°19.442' N, 44°39.196' E; 28 Apr 2019; V4 & EP leg.; VU 118-133–118-134 • 1 ♂; Kvemo Kartli Region, Poladauri (Samtsevrisi), Bolnisistskali (Poladauri) River, 665 m a.s.l.; 41°20.287' N, E44°30.271' E; 29 Apr 2019; V4 & EP leg.; VU 118-135 • 1 ♂, 1 ♀; the same, Poladauri (Chatakh), Pernenjanchai River, 700 m a.s.l.; 41°19.712' E 44°30.528' E; 29 Jun. 2019, V4 & EP leg.; VU 118-138–118-139 • 1 ♂; Kakheti Region, Karajala, marsh and grassland by the Turdo River, 630 m a.s.l.; 41°56.470' N, 45°25.794' E; 2 May 2019; V4 & EP leg.; VU 118-132.

AZERBAIJAN • 2 ♀; Şeki district, Kiş, forest brook above the village, 1050 m a.s.l.; 41°15.605' N, 47°11.143' E; 2 May 2019; V4 & EP leg.; VU 119-152–119-153 • 2 ♂, 9 ♀; the same, Kiş, forest beneath Galarsan ruin, 1190 m a.s.l.; 41°15.743' N, 47°13.617' E; 5 May 2019; V4 & EP leg.; VU 119-160, 119-162, 119-164–119-172 • 2 ♂; Şeki, Quirxbulaq, karst brook in deciduous forest, 595 m a.s.l.; 41°08.786' N, 47°15.532' E; 6 May 2019; V4 & EP leg.; VU 119-139–119-140 • 6 ♂, 5 ♀; the same, Cuma, Ayrichay River, marsh and open woods, 200 m a.s.l., 41°14.223' N, 46°54.601' E; 7 May 2019; V4 & EP leg.; VU 119-137, 119-138, 119-122–119-130 • 2 ♂; Qax Region, Qum, forest brooks above the village, 845 m a.s.l.; 41°28.215' N, 46°55.977' E; 8 May 2019; V4 & EP leg.; VU 119-159–119-160 • 1 ♂; Qebele district, Laza, springs and brooks on the opposite slope, 1435 m a.s.l.; 41°02.399', 47°55.891' E; 10 ay 2019; V4 & EP leg.; VU 119-154.

***Tachytrechus hamatus* Loew, 1871**

GEORGIA • 1 ♂; Kakheti region, Batsara Nature Reserve, Batsara River and its sidebrook, 810 m a.s.l.; 42°13.372' N, 45°18.122' E; 2 May 2019; V4 & EP leg.; VU 118-155.

Distribution. Romania; Estonia, Finland; Russia: Leningrad, Moscow and Voronezh Regions. First record for Georgia and Transcaucasus.

***Telmaturgus tumidulus* (Raddatz, 1873)**

AZERBAIJAN • 1 ♂; Şeki district, Cuma, Ayrichay River, marsh and open woods, 200 m a.s.l; 41°14.223' N, 46°54.601' E; 7 May 2019; V4 & EP leg.; VU 119-131.

***Thinophilus quadrimaculatus* Becker, 1902**

AZERBAIJAN • 1 ♀; Şeki district, Cuma, Ayrichay River, marsh and open woods, 200 m a.s.l.; 41°14.223' N, 46°54.601' E; 7 May 2019;V4 & EP leg.; VU 119-132.

Distribution. Israel, Egypt; Algeria, Iran, Tadjikistan, Tunisia. First record for Azerbaijan and Transcaucasus.

Conclusion

The present records of *Sybistroma transcaucasica* (Stackelberg, 1941) and *Thinophilus quadrimaculatus* Becker, 1902 increases the Azerbaijan species richness from

90 taxa (Negrobov et al. 2020) to 92 taxa. The records of *Campsicnemus marginatus* Loew, 1857, *Sybistroma transcaucasica* (Stackelberg 1941) and *Tachytrechus hamatus* Loew, 1871 increases the Georgian species diversity from 71 taxa (Negrobov et al. 2020) to 74 taxa.

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